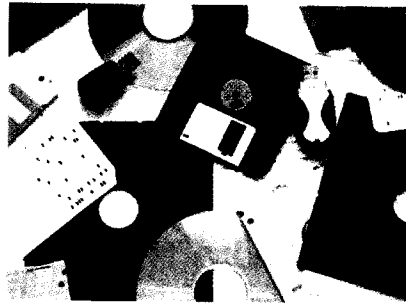


Building Montana's Digital Records Preservation

Capability: HJR 2 Electronic Records Management Work Group Report and Recommendation 6.1



Montana State Archives Mission:

- Appraise public records for continuing historic value;
- Preserve and provide access to state agency records, regardless of format, that have met their retention period and have continuing historical value.
- Promote sound records management principles and practices;
- Collaborate with State Records Committee in facilitating the establishment of policies, procedures, systems, standards and practices designed to assist records creators to create and retain records which are authentic, reliable and preservable.

*To achieve this mission in the current technological world, the State Archives will maintain partnerships with other public agencies and organizations, including the Secretary of State Records and Information Management Division and State Information Technology Services Division (SITSD) to effectively manage digital records. Statutory authority for the State Archives include MCA 22-3-203 in which the Archives is mandated to "...preserve noncurrent records of permanent historical value", and the Montana State Constitution which delineates accountability of public officials to the citizens they serve, especially Article II **Right to Know (Sec. 9)**, and the **Right of Privacy (Sec. 10)**.*

Goal of Recommendation 6.1: Hire consultant to develop a Digital Archives Preservation Plan to establish and sustain the ability of the Montana State Archives to collect, preserve and provide access to historically significant Montana State government records created or maintained in a digital format.

- Collaborate with SITSD as they implement an Electronic Records Management (ERM) enterprise solution to seek ways to maximize preservation capability.
- Develop and implement survey with select agency Records Managers to gather a cross section of preservation needs and challenges across state government. Use data to determine which of those agencies would be best suited for future pilot project.
- Consult with State Records Committee to establish best practices, policies and procedures for creation and maintenance of eRecords within state agencies.
- Develop efficient and effective workflow for archives staff to transfer, manage, preserve and provide access to eRecords. This will include determining hardware, software and/or contracted services needs.

Benefits: Consultant will create a road map for the State Archives to meet its legal mandate to preserve records of enduring historical significance. The resulting work will:

- Allow for the most efficient and cost effective path to digital preservation of significant government records
- Ensure government transparency
- Promote overall government efficiency
- Preserve evidence of civil and property rights
- Ensure that rapidly changing technologies do not create an “Information Dark Age”

Risks: The preservation of public records is essential to conduct the day-to-day business of government, and to leave a historical legacy for future generations. Documenting the people’s business, and how that business was conducted is an essential tool in a free society. The public record is used by people for business, historical, genealogical, and legal research. The loss of electronic records of historical importance means a loss of government:

- Accountability
- Ability to meet legal requirements
- Informational and monetary assets
- Efficiency

Costs: The State Archives anticipates a three phase project.

In **Phase One** a consultant would be hired to create a Digital Archives Preservation Plan delineating the most efficient and effective way to establish electronic records preservation capabilities at the State Archives.

Phase Two would consist of a pilot project implementing the consultant’s findings including establishing workflow, policies and procedures, purchase hardware and software required to perform in-house preservation tasks and create an RFI/RFP to select required vendor services. It is anticipated that the State Archives will apply for a National Historical Publications and Records Commission (NHPRC) grant in 2016 to offset these costs. It should be noted that these grants are extremely competitive with only three grants provided each year.

Phase Three would include an analysis of the pilot implementation, review and updating of processes and procedures, and the full roll-out of the preservation plan to all of state government.

It is estimated that Phase One would cost approximately \$207,900 (\$100 per hour for consultant/2080 hours). Phase Two would include staffing costs, hardware/software and vendor services adding to approximately \$125,000 (\$110,000 staffing costs which would be permanent/ongoing; \$15,000 hardware/software would be OTO). Phase Three costs would include ongoing staffing costs, maintenance contracts and storage costs adding to approximately \$120,000.

Concepts of eRecords Preservation:

Stages of Preservation:

- Ingest: process of bringing electronic records into preservation system
- Preserve: maintenance of records, files and documents in a usable form
- Maintain: quality control
- Access: continued, ongoing usability of a digital resource, retaining authenticity, accuracy and functionality

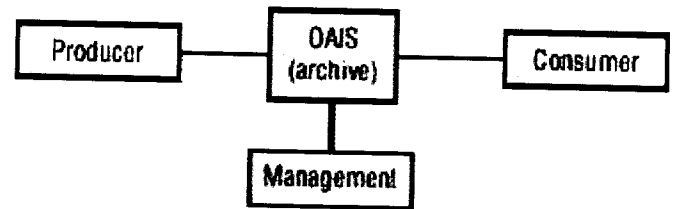


Figure 1

OAIS: Open Archival Information System

Preservation Approaches

There are two viable, often compatible and complementary, approaches for the long-term retention of records:

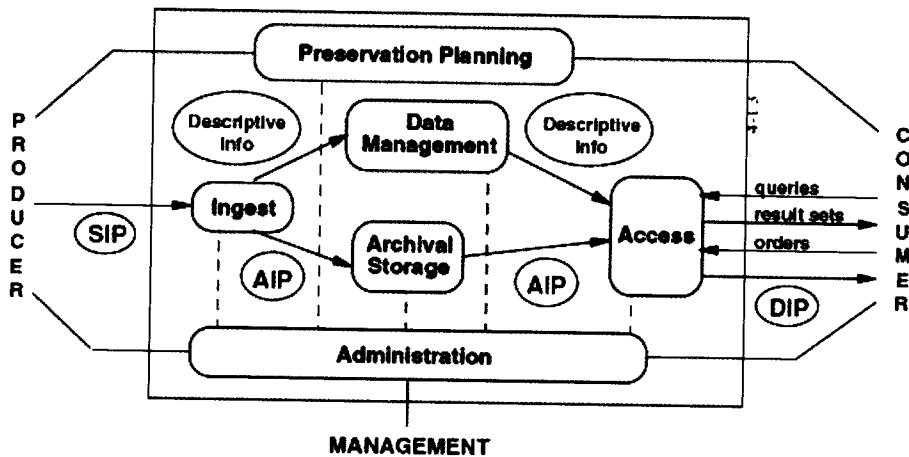
Conversion. When you convert a record, you change its file format. Often, conversion takes place to make the record software independent and available in an open or standard format. For example, you can convert a record created in Microsoft Word by saving it as a Rich Text Format (RTF) file or to PDF/A.

Migration. When you migrate a record, you move it from one computer platform, storage medium, or physical format to another. For example, you may need to migrate records from old magnetic tapes to new ones or to a different medium entirely to ensure continued accessibility.

Migration is the process of moving files to new media (also known as “refreshing”) or computer platforms in order to maintain their value. Conversion entails changing files from one format to another and may involve moving from a proprietary format, such as Microsoft Word, to a non-proprietary one such as a plain text file or XML. To avoid losing data in the process, you should perform initial tests and analysis to determine exactly what changes will occur and whether they are acceptable. With both migration and conversion, special attention must be paid to also maintaining the accessibility of any associated metadata. When properly planned and executed, the migration and conversion approach represents the easiest and most cost-effective preservation method available today.

Preservation Planning

A preservation plan should address an institution’s overall preservation goals and provide a framework that defines the methods used to reach those goals. At a minimum, the plan should define the collections covered by the plan; list the requirements of the records, practices and standards that are being followed, documentation of policies and procedures related to preservation activities, and staff responsibility for each preservation action. It is important to remember that preservation activities are not static and that the preservation plan will need to be reviewed and readdressed on a regular basis to remain viable and useful.



Preservation Costs

The Electronic Resource Preservation and Access Network (ERPANet) divides costs into four major categories: technical infrastructure, financial plan, staffing infrastructure, and outsourcing costs. Technical infrastructure costs include equipment purchase, maintenance, and upgrades necessary to keep networks online and adjust to software and hardware obsolescence. A solid financial plan must be backed up with a commitment to long-term funding. Staffing costs include the costs of hiring and training employees. Any services that are outsourced will have a direct effect on your preservation costs. Costs also depend on the record format, level of security required, and the length of time the materials need to be preserved.

A cost-benefit analysis should be done to analyze each aspect of your workflow to determine the most cost-effective method of preserving identified records.

*Based on information from Minnesota State Historical Society Electronic Records Guidelines, National Archives and Records Administration, Society of American Archivists, and Council of State Archivists websites.